International Conference
Nuclear Theory in the Supercomputing Era — 2018
(NTSE-2018)

PROGRAM

Sunday, October 28. *Hotel ICC 1F.*

16:30–19:00	*Registration*

Monday, October 29. *Auditorium, IBS Science Culture Center 2F.*

8:00–9:00	*Registration*
	Chair: James P. Vary
9:00–9:10	*Conference opening*
9:10–9:40	**Youngman Kim:** Daejeon16 NN interaction
9:40–10:10	**Ruprecht Machleidt:** What is wrong with our current nuclear forces?
10:10–10:30	**Mario Sánchez:** The two-nucleon system within chiral effective field theory
10:30–11:00	*Coffee break*
	Chair: Jerry Draayer
11:00–11:30	**Ulf-G. Meißner:** Towards nuclear physics as precision science
11:30–12:00	**Dean Lee:** Applications of lattice effective field theory to nuclear forces and structure
12:00–12:30	**Andreas Ekström:** Statistical analysis and optimization of chiral forces
12:30–14:00	*Lunch*
	Chair: Nadezda Smirnova
14:00–14:30	**Thomas Neff:** Cluster states in ^{12}C and neighboring nuclei
14:30–15:00	**Alexander Volya:** Interplay of single-particle and cluster degrees of freedom in atomic nuclei
15:00–15:30	**Yury Tchuvil'sky:** Nuclear clustering, step to a supercomputing approach
15:30–15:50	**Dmitry Rodkin:** *Ab initio* description of one-nucleon resonances and halo states in light nuclei
15:50–16:20	*Coffee break*
	Chair: Thomas Neff
16:20–16:40	**Seonghyun Kim:** Calculation of ground-state energy for light nuclei with the Strutinsky's method
16:40–17:00	**Eun Jin In:** Nuclear mass table in deformed relativistic continuum Hartree-Bogoliubov theory
17:00–17:20	**Kyoungsu Heo:** Extended optical model analyses of ^{11}Be + ^{197}Au System with dynamical polarization potential
17:20–17:40	**Jounghwa Lee:** A semi-empirical model for calculating fission product yields
19:00	*Welcome party*

Tuesday, October 30. *Auditorium, IBS Science Culture Center 2F.*

	Chair: Ulf-G. Meißner
8:30–9:00	**Young Kwan Kwon:** Status of RAON
9:00–9:30	**Nir Barnea:** *Ab initio* calculation of nuclear structure effects in muonic atoms
9:30–10:00	**Wei Zuo:** Three-body force effect on the Properties of nuclear matter
10:00–10:30	**Francesca Sammarruca:** Correlations in nuclei and nuclear matter
10:30–11:00	*Coffee break*
	Chair: Ruprecht Machleidt
11:00–11:30	**Esmond G. Ng:** Scientific discovery through exascale computing
11:30–12:00	**Kihyeon Cho:** Nuclear theory in the 5th supercomputing era
12:00–12:30	**Stefan Wild:** Optimization problems in nuclear theory
12:30–14:00	*Lunch*
	Chair: Kimiko Sekiguchi
14:00–14:30	**Witold Nazarewicz:** Quantified nuclear density functional theory
14:30–15:00	**Chang Ho Hyun:** Novel Framework of Nuclear EDF
15:00–15:30	**Feng Pan:** Algebraic solution of the isovector pairing problem
15:30–16:00	**Myung Ki Cheoun:** Competence of pairing correlations and deformation in the nuclear structure
16:00–16:30	*Coffee break*
	Chair: Furong Xu
16:30–17:00	**Chong Qi:** Large-scale shell model calculations of heavy nuclei
17:00–17:30	**Ionel Stetcu:** Modeling fission dynamics with leadership class computing capabilities
17:30–18:00	**Jun Terasaki:** Examination of consistency of QRPA approach to double-beta decay

Wednesday, October 31. *Auditorium, IBS Science Culture Center 2F.*

	Chair: Francesca Sammarruca
9:00–9:30	**Petr Navrátil:** Nuclear structure and dynamics from chiral forces
9:30–10:00	**Charlotte Elster:** Nucleon-nucleus elastic scattering using *ab initio* folding potentials based on NCSM nonlocal one-body densities
10:00–10:30	**Bruce R. Barrett:** Microscopically calculated shell-model effective two-body matrix elements in the *sd* shell
10:30–11:00	**Seung-Woo Hong:** Science opportunities with RAON
11:30–13:00	*Lunch*

13:00–18:00	*Excursion*

18:30	*Conference dinner*

Thursday, November 1. *Auditorium, IBS Science Culture Center 2F.*

	Chair: Petr Navrátil
8:30–9:00	**Kimiko Sekiguchi:** Approach to three-nucleon forces via three- and four-nucleon scattering
9:00–9:30	**Roman Skibiński:** Nucleon-deuteron scattering with chiral semilocal coordinatespace and momentum-space regularized interactions
9:30–10:00	**Andreas Nogga:** Faddeev–Yakubovsky and Jacobi-no-core-shell model results for light hypernuclei
10:00–10:30	**Kacper W. Topolnicki:** ^{3}H and ^{3}He bound state calculations without angular momentum decomposition
10:30–11:00	*Coffee break*
	Chair: Charlotte Elster
11:00–11:30	**Rimantas Lazauskas:** On the solution of the Faddeev–Yakubovsky equations for five nucleon systems
11:30–12:00	**Alexander K. Motovilov:** Unphysical energy sheets and resonances in the Friedrichs–Faddeev model
12:00–12:30	**Sergey L. Yakovlev:** *Ab initio* scattering calculation in three-body Coulomb systems: e^+- H, e^-- H and e^+- He$^+$
12:30–14:00	*Lunch*
	Chair: Dean Lee
14:00–14:30	**Evgeny Epelbaum:** High-precision nuclear forces from chiral EFT: Where do we stand?
14:30–15:00	**James P. Vary:** No-core shell model with chiral effective field theory interactions
15:00–15:30	**Furong Xu:** *Ab initio* calculations of nuclear resonances
15:30–16:00	**Shung-Ichi Ando:** The S_{E1} factor of radiative alpha capture on ^{12}C in cluster effective field theory
16:00–16:30	*Coffee break*
	Chair: Witold Nazarewicz
16:30–17:00	**Luigi Coraggio:** Chiral three-body forces and the monopole component of effective shell-model hamiltonians
17:00–17:30	**Carlo Barbieri:** Recent advances for computational self-consistent Green's function theory in nuclear physics
17:30–18:00	**Noritaka Shimizu:** Large-scale shell model calculations and chiral doublet bands in ^{128}Cs

Friday, November 2. *Conference Room, IBS Science Culture Center 2F.*

	Chair: Alexander Volya
8:30–9:00	**Tobias Frederico:** The relativistic dynamics in Minkowski space: exploring hadron structure
9:00–9:30	**Vladimir Karmanov:** Bound states of relativistic origin
9:30–10:00	**Xingbo Zhao:** Light-front approach to a chiral nucleon-pion Lagrangian
10:00–10:30	**Chandan Mondal:** Basis light-front quantization approach for the nucleon
10:30–11:00	*Coffee break*
	Chair: Nir Barnea
11:00–11:30	**Mark A. Caprio:** Predictions for nuclear rotational structure from *ab initio* calculations
11:30–12:00	**Gaute Hagen:** A solution to the puzzle of quenched beta-decays
12:00–12:30	**Nadezda Smirnova:** Isospin-symmetry breaking correction to Fermi beta-decay
12:30–14:00	*Lunch*
	Chair: Esmond G. Ng
14:00–14:30	**Jerry Draayer:** Symmetry adapted no-core shell-model calculations for probing the structure of atomic nuclei
14:30–15:00	**Anna McCoy:** Convergence in the *ab initio* symplectic no-core configuration interaction framework
15:00–15:30	**Takashi Abe:** No-core Monte Carlo shell model calculations with Daejeon16 NN interaction
15:30–16:00	**Kevin Fossez:** Neutron-rich helium isotopes: complex made simple
16:00–16:30	*Coffee break*
	Chair: Youngman Kim
16:30–17:00	**Alexander I. Mazur:** Description of continuum states within no-core shell model. Single-state HORSE method
17:00–17:30	**Igor A. Mazur:** Elastic $n-^6$He scattering and ^{7}He resonant states in single-state HORSE method
17:30–18:00	**Andrey Shirokov:** Tetraneutron resonance
18:00–18:10	*Conference closing*